PATENT
Customer No.: 22,852
Attorney Docket No.: 02906.0357

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	)	
	)	
Patrick R. LANCASTER, III et al.	)	Group Art Unit: 3651
	)	
Application No.: 10/696,736	)	Examiner: Prakasam, Ramya G.
	)	
Filed: October 30, 2003	)	
	)	
For: METHOD AND SYSTEM FOR BUILDING A LOAD	)	Confirmation No.: 6347

Attention - Mail Stop Appeal Briefs - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

TRANSMITTAL OF APPEAL BRIEF (37 C.F.R. §41.37)

Transmitted herewith is the APPEAL BRIEF in this application with respect to the Notice of Appeal filed on February 11, 2008.

This application is on behalf of

☒ Small Entity ☐ Large Entity

Pursuant to 37 C.F.R. 41.20(b)(2), the fee for filing the Appeal Brief is:

☒ $255.00 (Small Entity)

☐ $510.00 (Large Entity)

TOTAL FEE DUE:

Appeal Brief Fee	$255.00
Extension Fee (if any)	$525.00
Total Fee Due	$780.00

☒ Fee payments totaling $780.00 are being paid electronically at the time of filing.

PETITION FOR EXTENSION. If any extension of time is necessary for the filing of this Appeal Brief, and such extension has not otherwise been requested, such an extension is hereby requested, and the Commissioner is authorized to charge necessary fees for such an extension to Deposit Account 06-0916.

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: August 18, 2008

By: _____
Thomas Y. Ho
Reg. No. 61,539

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Sir:

APPEAL BRIEF UNDER BOARD RULE § 41.37

In support of the Notice of Appeal filed February 11, 2008, and further to Board Rule 41.37, Appellant presents this brief along with a fee payment in the amount of $255.00 (small entity) required under 37 C.F.R. § 41.20(b)(2), the fee payment being made electronically at the time of filing. Appellant encloses herewith a Petition for Extension of Time of three months, extending the period for response to August 18, 2008 (August 16, 2008 being Saturday), the fee payment for the extension of time being made electronically at the time of filing.

This Appeal is in response to the rejection of claims 24-32, 38, 43-54, 62, 65-74, 83, 86, 173-180, 182-187, 189-194, 196-199, and 201 in the Office Action mailed

October 9, 2007, that was maintained by the Notice of Panel Decision from Pre-Appeal Brief Review, mailed on April 16, 2008.

If any additional fees are required or if the payment is insufficient, Appellant requests that the required fees be charged to Deposit Account 06-0916.

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I. Real Party In Interest

Lantech.com, LLC is the real party in interest.

II. Related Appeals And Interferences

There are currently no other appeals or interferences, of which Appellant, Appellant's legal representative, or Assignee are aware, that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status Of Claims

Claims 24-32, 38, 43-54, 62, 65-74, 83, 86, 173-180, 182-187, 189-194, 196-199 and 201 are rejected; claims 181, 188, 195, 200, and 202 are withdrawn; and claims 1-23, 33-37, 39-42, 55-61, 63, 64, 75-82, 84, 85, and 87-172 are cancelled. Claims 24-32, 38, 43-54, 62, 65-74, 83, 86, 173-180, 182-187, 189-194, 196-199 and 201 are involved in this appeal. A copy of these claims is provided in the attached Claims Appendix.

IV. Status Of Amendments

No amendments have been filed subsequent to the final rejection of claims 24-32, 38, 43-54, 62, 65-74, 83, 86, 173-180, 182-187, 189-194, 196-199 and 201.

V. Summary Of Claimed Subject Matter

Independent claim 24 is directed to a method of building a load 124 with product 118 from an infeed area 110 of a palletizer 100. *See* Specification, e.g., page 15, lines 1 and 2 in paragraph [054], and lines 1-3 in paragraph [055]; *see also*, e.g., FIGS. 1, 3, 4, 10, and 11. The method may include defining a desired area of a load to be filled with product using at least two of a height sensor 170, a length sensor 152, and a width sensor 188. *See Id.*, e.g., at page 12, lines 1-5 in paragraph [047]; page 21, lines 8-14 in paragraph [071]; page 27, lines 1 and 2 in paragraph [087]; and page 30, lines 1 and 2 in paragraph [095]; *see also*, e.g., FIGS. 1, 3, and 4. The method may also include automatically filling the desired area with product. *See Id.*, e.g., at page 14, lines 1-3 in paragraph [051]; and page 15, lines 1 and 2 in paragraph [055]. The method may also include determining when the desired area is filled using at least two of the height sensor, the length sensor, and the width sensor. *See Id.*, e.g., at page 31, lines 1 and 2 in paragraph [099]; and page 32, lines 1-3 in paragraph [0100]; *see also*, e.g., FIG. 9B, element 252.

Independent claim 48 is directed to a method of building a load 124 with product 118 from an infeed area 110. *See Id.*, e.g., at page 15, lines 1 and 2 in paragraph [054], and lines 1-3 in paragraph [055]; *see also*, e.g., FIGS. 1, 3, 4, 10, and 11. The method may also include automatically moving a product from the infeed area to a load building area 114. *See Id.*, e.g., at page 14, lines 1-3 in paragraph [051]; and page 15, lines 1 and 2 in paragraph [055]; *see also*, e.g., FIGS. 1, 3, 4, 10, and 11. The method may also include automatically depositing the product on the load. *See Id.*, e.g., at page 15, lines 1 and 2 in paragraph [055]; *see also*, e.g., FIGS. 1, 3, 4, 10, and 11. The

method may also include automatically repeating the moving and depositing steps by repeating a single logic sequence for at least two consecutive moving and depositing steps. *See Id.*, e.g., at page 17, lines 4-6 in paragraph [062]; page 18, lines 7 and 8 in paragraph [062]; and page 39, lines 1-3 and 8-15 in paragraph [0119]. The method may also include automatically determining when the load is completely built using at least two of a height sensor 170, a length sensor 152, and a width sensor 188. *See Id.*, e.g., at page 31, lines 1 and 2 in paragraph [099]; and page 32, lines 1-3 in paragraph [0100]; *see also*, e.g., FIGS. 3-5.

Independent claim 67 is directed to a method of building a load 124 with product 118 from an infeed area 110. *See Id.*, e.g., at page 15, lines 1 and 2 in paragraph [054], and lines 1-3 in paragraph [055]; *see also*, e.g., FIGS. 1, 3, 4, 10, and 11. The method may include defining a desired area of the load to be filled. *See Id.*, e.g., at page 12, lines 1-5 in paragraph [047]; page 21, lines 8-14 in paragraph [071]; page 27, lines 1 and 2 in paragraph [087]; and page 30, lines 1 and 2 in paragraph [095]. The method may also include automatically transporting product to the desired area of the load. *See Id.*, e.g., at page 14, lines 1-3 in paragraph [051]; and page 15, lines 1 and 2 in paragraph [055]. The method may also include automatically repeating the transporting step by repeating a single logic sequence for at least two consecutive transporting cycles. *See Id.*, e.g., at page 17, lines 4-6 in paragraph [062]; page 18, lines 7 and 8 in paragraph [062]; and page 39, lines 1-3 and 8-15 in paragraph [0119]; *see also*, e.g., FIG. 9B, element 262. The method may also include automatically determining when the load is completely built using at least two of a height sensor 170,

a length sensor 152, and a width sensor 188. *See Id.*, e.g., at page 31, lines 1 and 2 in paragraph [099]; and page 32, lines 1-3 in paragraph [0100]; *see also*, e.g., FIGS. 3-5.

Independent claim 173 is directed to a method of building a load 124 with product 118 from an infeed area 110. *See Id.*, e.g., at page 15, lines 1 and 2 in paragraph [054], and lines 1-3 in paragraph [055]; *see also*, e.g., FIGS. 1, 3, 4, 10, and 11. The method may include defining a desired area of a load to be filled with product using at least two of a height sensor 170, a length sensor 152, and a width sensor 188. *See Id.*, e.g., at page 12, lines 1-5 in paragraph [047]; page 21, lines 8-14 in paragraph [071]; page 27, lines 1 and 2 in paragraph [087]; and page 30, lines 1 and 2 in paragraph [095]; *see also*, e.g., FIGS. 1, 3, and 4. The method may also include automatically filling the desired area with product by executing a first logic sequence in a controller 134. *See Id.*, e.g., at page 14, lines 1-3 in paragraph [051]; page 17, lines 4-6 in paragraph [062]; page 18, lines 7 and 8 in paragraph [062]; and page 39, lines 1-3 and 8-15 in paragraph [0119]; *see also*, e.g., FIGS. 2, 9A, and 9B, elements 232-260. The method may also include repeating the first logic sequence for at least two transporting cycles. *See Id.*, e.g., at page 17, lines 4-6 in paragraph [062]; page 18, lines 7 and 8 in paragraph [062]; and page 39, lines 1-3 and 8-15 in paragraph [0119]; *see also*, e.g., FIG. 9B, element 262. The method may also include executing a second logic sequence in the controller for a different transporting cycle while building the load. *See Id.*, e.g., at page 17, lines 4-6 in paragraph [062]; page 18, lines 7 and 8 in paragraph [062]; and page 19, lines 4-6 in paragraph [066]. The method may also include determining when the desired area is filled using at least two of the height sensor, the length sensor, and the width sensor. *See Id.*, e.g., at page 31,

lines 1 and 2 in paragraph [099]; and page 32, lines 1-3 in paragraph [0100]; *see also*, e.g., FIG. 9B, element 252.

Independent claim 174 is directed to a method of building a load 124 with product 118 from an infeed area 110 of a palletizer 100. *See Id.*, e.g., at page 15, lines 1 and 2 in paragraph [054], and lines 1-3 in paragraph [055]; *see also*, FIGS. 1, 3, 4, 10, and 11. The method may include defining a desired area of a load to be filled with product using a height sensor 170 and at least one of a length sensor 152 and a width sensor 188. *See Id.*, e.g., at page 12, lines 1-5 in paragraph [047]; page 21, lines 8-14 in paragraph [071]; page 27, lines 1 and 2 in paragraph [087]; and page 30, lines 1 and 2 in paragraph [095]; *see also*, e.g. FIGS. 1, 3, and 4. Using the height sensor may include positioning the height sensor to set a desired height of the load. *See Id.*, e.g., at page 19, lines 4-6 in paragraph [066]; and page 27, lines 1 and 2 in paragraph [087]; *see also*, e.g., FIGS. 3 and 7. The method may include automatically filling the desired area with product. *See Id.*, e.g., at page 14, lines 1-3 in paragraph [051]; and page 15, lines 1 and 2 in paragraph [055]. The method may also include determining when the desired area is filled. *See Id.*, e.g., at page 31, lines 1 and 2 in paragraph [099]; and page 32, lines 1-3 in paragraph [0100].

Independent claim 176 is directed to a method of building a load 124 with product 118 from an infeed area 110. *See Id.*, e.g., at page 15, lines 1 and 2 in paragraph [054], and lines 1-3 in paragraph [055]; *see also*, e.g., FIGS. 1, 3, 4, 10, and 11. The method may include automatically moving a product from the infeed area to a load building area 114. *See Id.*, e.g., at page 14, lines 1-3 in paragraph [051]; and page 15, lines 1 and 2 in paragraph [055]; *see also*, e.g., FIGS. 1, 3, 4, 10, and 11. The

method may also include automatically depositing the product on the load. *See Id.*, e.g., at page 15, lines 1 and 2 in paragraph [055]; *see also*, e.g., FIGS. 1, 3, 4, 10, and 11. The method may also include automatically repeating the moving and depositing steps by repeating a single logic sequence for at least two consecutive moving and depositing steps. *See Id.*, e.g., at page 17, lines 4-6 in paragraph [062]; page 18, lines 7 and 8 in paragraph [062]; and page 39, lines 1-3 and 8-15 in paragraph [0119]; *see also*, e.g., FIG. 9B, element 262. The first moving and first depositing steps may load a first product having a first size onto the load, and wherein the second moving and second depositing steps may load a second product having a second size different from the first size onto the load. *See Id.*, e.g., at page 12, lines 1-6 in paragraph [048]. The method may also include automatically determining when the load is completely built. *See Id.*, e.g., at page 31, lines 1 and 2 in paragraph [099]; and page 32, lines 1-3 in paragraph [0100].

Independent claim 178 is directed to a method of building a load 124 with product 118 from an infeed area 110 of a palletizer 100. *See Id.*, e.g., at page 15, lines 1 and 2 in paragraph [054], and lines 1-3 in paragraph [055]; *see also*, FIGS. 1, 3, 4, 10, and 11. The method may include defining a desired space to be filled with product by physically establishing at least two of a height threshold, a length threshold, and a width threshold. *See Id.*, e.g., at page 12, lines 1-5 in paragraph [047]; page 21, lines 8-14 in paragraph [071]; page 27, lines 1 and 2 in paragraph [087]; and page 30, lines 1 and 2 in paragraph [095]; *see also*, e.g., FIGS. 1, 3, and 4, elements 152, 170, and 188. The method may also include automatically filling the desired space with product. *See Id.*, e.g., at page 14, lines 1-3 in paragraph [051]; and page 15, lines 1

and 2 in paragraph [055]. The method may also include automatically signaling that the desired space is filled when product reaches at least two of the height threshold, the length threshold, and the width threshold. *See Id.*, e.g., at page 31, lines 1 and 2 in paragraph [099]; and page 32, lines 1-3 in paragraph [0100]; *see also*, e.g., FIG. 9B, element 252.

Independent claim 182 is directed to a method of building a load 124 with product 118 from an infeed area 110 of a palletizer 100. *See Id.*, e.g., at page 15, lines 1 and 2 in paragraph [054], and lines 1-3 in paragraph [055]; *see also*, e.g., FIGS. 1, 3, 4, 10, and 11. The method may include defining boundaries of a desired area of a load to be filled with product by physically establishing at least two of a load height, a load length, and a load width. *See Id.*, e.g., at page 12, lines 1-5 in paragraph [047]; page 21, lines 8-14 in paragraph [071]; page 27, lines 1 and 2 in paragraph [087]; and page 30, lines 1 and 2 in paragraph [095]; *see also*, e.g., FIGS. 1, 3, and 4, elements 152, 170, and 188. The method may also include automatically filling the desired area with a quantity of product. *See Id.*, e.g., at page 14, lines 1-3 in paragraph [051]; and page 15, lines 1 and 2 in paragraph [055]. The method may also include automatically signaling when the desired area is filled when product reaches at least two of the load height, the load length, and the load width. *See Id.*, e.g., at page 31, lines 1 and 2 in paragraph [099]; and page 32, lines 1-3 in paragraph [0100]; *see also*, e.g., FIG. 9B, element 252.

Independent claim 189 is directed to a method of building a load 124 with product 118 from an infeed area 110 of a palletizer 100. *See Id.*, e.g., at page 15, lines 1 and 2 in paragraph [054], and lines 1-3 in paragraph [055]; *see also*, FIGS. 1, 3,

4, 10, and 11. The method may include defining a desired area of a load to be filled with product by establishing physical markers delimiting at least two of a load height, a load length, and a load width. *See Id.*, e.g., at page 12, lines 1-5 in paragraph [047]; page 21, lines 8-14 in paragraph [071]; page 27, lines 1 and 2 in paragraph [087]; and page 30, lines 1 and 2 in paragraph [095]; *see also*, e.g., FIGS. 1, 3, and 4, elements 152, 170, and 188. The method may also include automatically filling the desired area with product. *See Id.*, e.g., at page 14, lines 1-3 in paragraph [051]; and page 15, lines 1 and 2 in paragraph [055]. The method may also include automatically signaling when the desired area is filled when product reaches at least two of the load height, the load length, and the load width. *See Id.*, e.g., at page 31, lines 1 and 2 in paragraph [099]; and page 32, lines 1-3 in paragraph [0100]; *see also*, e.g., FIG. 9B, element 252.

Independent claim 196 is directed to a method of building a load 124 with product 118 from an infeed area 110 of a palletizer 100. *See Id.*, e.g., at page 15, lines 1 and 2 in paragraph [054], and lines 1-3 in paragraph [055]; *see also*, e.g., FIGS. 1, 3, 4, 10, and 11. The method may include defining a boundary to be filled in with product by physically setting at least two of a height dimension, a length dimension, and a width dimension of the load. *See Id.*, e.g., at page 12, lines 1-5 in paragraph [047]; page 21, lines 8-14 in paragraph [071]; page 27, lines 1 and 2 in paragraph [087]; and page 30, lines 1 and 2 in paragraph [095]; *see also*, e.g., FIGS. 1, 3, and 4, elements 152, 170, and 188. The method may also include automatically filling in the boundary with product, wherein the height dimension, the length dimension, and the width dimension of the load remain substantially constant as product

characteristics vary. *See Id.*, e.g., at page 14, lines 1-3 in paragraph [051]; page 39, lines 1-3 and 8-15 in paragraph [0119]; and page 46, lines 1-7 paragraph [0137]. The method may also include automatically signaling that the boundary is filled in when product reaches at least two of the height dimension, the length dimension, and the width dimension of the load. *See Id.*, e.g., at page 31, lines 1 and 2 in paragraph [099]; and page 32, lines 1-3 in paragraph [0100]; *see also*, FIG. 9B, element 252.

Independent claim 201 is directed to a method of building loads 124 with product 118 from an infeed area 110 of a palletizer 100. *See Id.*, e.g., at page 15, lines 1 and 2 in paragraph [054], and lines 1-3 in paragraph [055]; *see also*, FIGS. 1, 3, 4, 10, and 11. The method may include defining a boundary of a desired area of a first load to be filled with product of a first size by physically delineating at least two of a desired height of the first load, a desired length of the first load, and a desired width of the first load. *See Id.*, e.g., at page 12, lines 1-5 in paragraph [047]; page 21, lines 8-14 in paragraph [071]; page 27, lines 1 and 2 in paragraph [087]; and page 30, lines 1 and 2 in paragraph [095]; *see also*, e.g., FIGS. 1, 3, and 4, elements 152, 170, and 188. The method may also include automatically filling the desired area with as much product of the first size as needed to meet the boundary. *See Id.*, e.g., at page 14, lines 1-3 in paragraph [051]; page 39, lines 1-3 and 8-15 in paragraph [0119]; and page 46, lines 1-7 paragraph [0137]. The method may also include moving the first load away. *See Id.*, e.g., at page 15, lines 8-10 in paragraph [056]. The method may also include automatically filling the desired area with as much product of a second size different from the first size as needed to meet the boundary without adjusting the boundary. *See Id.*, e.g., at page 12, lines 1-6 in paragraph [048]; page 14, lines 1-3 in paragraph [051];

page 39, lines 1-3 and 8-15 in paragraph [0119]; and page 46, lines 1-7 paragraph [0137].

VI. Grounds Of Rejection

A. Claims 24-31, 38, 43, 44, 46-50, 54, 62, 65, 67-71, 83, 86, and 173 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,098,254 to Becicka et al. ("Becicka").

B. Claims 32, 45, 51-53, 66, 72-74, 174-180, 182-187, 189-194, 196-199, and 201 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Becicka.

VII. Arguments

A. Introduction

Palletizers are used to load pallets with product units, such as cartons, bags, bundles, or other packages. Palletizers are typically programmed with a loading sequence to build a load. The palletizers follow the sequence to place one product unit, or one set of product units, at a time in a location specifically programmed in the sequence.

Often, product manufacturers use a single palletizer to load different sized products at different times. To do this, the palletizer must be adapted to changeover from one product to another and build palletized loads with the different sized products. Because building the load requires product units to be placed in predetermined or assigned locations, changeover from one size or shape of product to another typically requires a new computer program setting forth a new sequence for the product, which is determined by the size and shape of the product. Accordingly, when the product size is changed, or the orientation of the product is changed, the sequence must also be changed. Preparing and programming a new sequence for each change in product size can be an expensive and a complex procedure, furthermore, frequent changeover using complex systems can be prone to errors and may result in downtime and/or other inefficiencies.

Appellant's palletizer and method avoid the above-described deficiencies. The palletizer may operate to fill a predefined volume with product to create a palletized load. The volume may be determined based upon a desired row length, a desired layer width, and a desired load height. Sensors may be used to delineate the boundaries for

row length, layer width, and load height. The sensors may be adjusted by changing their locations. The palletizer may fill the volume by depositing product on the palletized load until the sensors indicate that the volume is filled. Accordingly, the palletizer of the present invention may be configured to build a palletized load based on the palletized load volume and not based on the product size.

Building a palletized load based on the volume of the load, rather than the product size, eliminates the need to have a different program sequence for each different size of products, as is required by conventional palletizers. To build the palletized load, the present invention follows the same program sequence regardless of the size of the product, and continues to build until the pre-defined volume is filled. Because of this, the palletizer can build a palletized load using products having different dimensions or orientations in each row, layer, or load, without the need to use different program sequences.

The placement of products having different sizes may be accomplished without changing over the programming system and/or making large and difficult changes to the palletizer's structure. Thus, Appellant's palletizer is efficient, easy to use, and eliminates the need for separate programming for each size of product. Because of this, operating costs are reduced, resulting in savings to product manufacturers. Thus, the palletizer is more versatile, more cost effective, and simpler to use than palletizers known in the art.

B. Anticipation Rejections

The Apparatus Disclosed in Becicka

Becicka discloses a palletizer 10 that includes a "Y" axis assembly 18; a hand assembly 20 for grasping and placing rows of cartons 12, hand assembly 20 being mounted to an extendable end 22 of "Y" axis assembly 18; and a carriage 24 that moves "Y" axis assembly 18 vertically along a vertical support column ("Z" axis) 16 . *See* Becicka, column 2, lines 16-25 and 32-34; and FIG. 1.

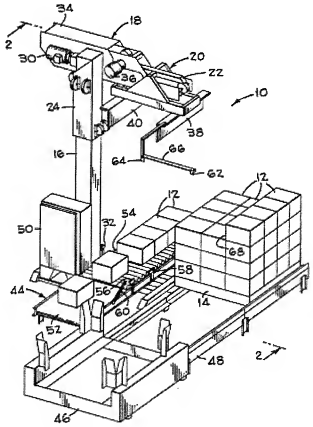


FIG. 1 of Becicka

Becicka also discloses that palletizer 10 includes adjustable limit switches 32 and 42, first and second photodetectors 56 and 58, and first and second proximity

detectors 62 and 64. *See Id.* at column 2, lines 42 and 57; and column 3, lines 12, 17, 50, and 56; *see also* FIG. 1. According to Becicka, "adjustable limit switch 32 is provided for sensing when the carriage 24 has reached a predetermined lower limit relative to the vertical column 16," and "adjustable limit switch 42 (FIG. 2) is provided for sensing when the 'Y' axis assembly 18 has been extended to a predetermined limit." *See Id.* at column 2, lines 42-44 and 57-59; and FIG. 2.

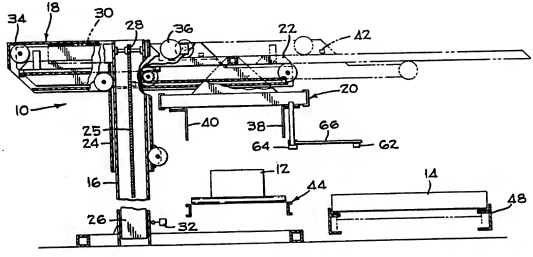


FIG. 2 of Becicka

In addition, Becicka discloses that "proximity detectors 62 and 64 function to sense the position of the hand assembly 20 relative to the cartons 12 already in place on the pallet 14." *See Id.* at column 4, lines 1-3. Becicka also discloses photodetectors 56 and 58, wherein "first photodetector 56 . . . counts the cartons 12 as each enters the high-speed section 54," while "[a]s the cartons 12 pass the photodetector 58 . . . this information is also provided to the control circuitry for detecting completion of a row of the cartons 12." *See Id.* at column 3, lines 12-21.

Becicka then goes on to disclose that

> [p]rogramming of the control system involves entering various predetermined operational data, such as the number of the cartons 12 per row; the orientation of each of the cartons 12 within the row, spacing (per user requirements) between the adjacent cartons 12 within the row and the total number of the cartons 12 for a fully loaded form of the pallet 14. This predetermined operational data and the control signal information is manipulated by a computer software program (the source code output of the program is set forth in the attached Software Appendix). Control of the robotic palletizer 10 is thus effectuated in accordance with execution of the computer program instructions which utilize the predetermined operational data input by the user and the control signal information as the variable parameters. The cartons 12 are then conveyed onto the low-speed section 52 of the infeed conveyor 44.

Id. at column 4, lines 30-45.

The Method Disclosed in Becicka

In Becicka, limit switches 32 and 42 define the starting point for building the load. The starting point is the first row of cartons 12. Becicka states,

> when the pallet 14 is initially empty, the first row of the cartons 12 is positioned on the pallet 14 by raising the "Z" axis for a predetermined time, then extending the "Y" axis assembly 18 until the limit switch 42 associated therewith is activated. The "Z" axis is then lowered to the position of a "home" limit switch 32, and the hand assembly releases the cartons 12 onto the pallet 14.

Id. at column 4, lines 52-59. The first row of cartons 12 is the rightmost row of four cartons 12 in the bottom layer of the load shown in FIG. 1, since that is the row corresponding to "Y" axis assembly 18 being extended to its limit, and "Z" axis 16 being at its home position.

After the starting point has been established, and the first row of cartons 12 have been placed on pallet 14, palletizer 10 places the next row of cartons 12 using detector 64, and by using the first row of cartons 12 as a reference. Becicka states,

> [w]hen the next row of the cartons 12 has been accumulated, the "Z" axis raises for a predetermined time then the "Y" axis assembly 18 is extended

> until the second photodetector 64 detects the inner edge of the previously deposited row of cartons 12. The "Z" axis is then again lowered until the "home" limit switch 32 is actuated. The second row of the cartons 12 is then released and is deposited on the pallet 14 in close proximity to the first row. Operation in this manner continues until the first layer of the cartons 12 on the pallet 14 is completed.

Id. at column 4, lines 66-68; and column 5, lines 1-8. Once the first layer of cartons 12 has been completed, palletizer 10 places the first row of cartons 12 in the second layer using detector 62, and by using the first layer of cartons 12 as a reference. Becicka states, "[t]o form the second layer of the cartons 12 on the pallet 14, the horizontal arm 18 is first raised along the 'Z' axis 16 until the first proximity detector 62 clears the top of the first layer." *Id.* at column 5, lines 9-12. Once the top of the first layer of cartons 12 has been cleared, the rows of cartons 12 in the second layer are placed in a manner similar to how the rows of cartons 12 in the first layer were placed. *See Id.* at column 5, lines 12-25.

1) The Rejection Of Claims 24-31, 38, 43, 44, 46 and 47 Under 35 U.S.C. § 102(b) as Being Anticipated by U.S. Patent No. 5,098,254 to Becicka et al. ("Becicka") Should be Withdrawn

The Examiner rejected claims 24-31, 38, 43, 44, 46 and 47 under 35 U.S.C. § 102(b) as being anticipated by Becicka. The Board should reverse the rejection because Becicka fails to teach each and every element recited in those claims. The arguments that follow make reference to descriptions and figures in Becicka, including those discussed above in section B.

Independent claim 24 recites, *inter alia*, "defining a desired area of a load to be filled with product using at least two of a height sensor, a length sensor, and a width

sensor . . . and determining when the desired area is filled using at least two of the height sensor, the length sensor, and the width sensor."

On page 2 of the Office Action, the Examiner contends that Becicka discloses "defining desired area of a load to be filled with products using at least two of a height sensor 62, a length sensor 56/58, and a width sensor 64. The method comprises automatically filling the desired area with products and determining when the desired area is filled."

The Examiner's contentions are not supported by Becicka. It is not apparent how switches and detectors 32, 42, 56, 58, 62, and 64 in Becicka could possibly define a horizontal area to be filled by a layer of cartons 12, and determine when that area has been filled. Palletizer 10 builds the first layer of cartons 12 by placing the first row of cartons 12 (the bottom right row in FIG. 1) with the help of limit switches 32 and 42, then placing the next two rows of cartons 12 (the bottom middle and the bottom left rows in FIG. 1) with the help of limit switch 32 and proximity detector 64, with each subsequent row being placed closer to vertical support column 16 than the one before. *See* Becicka at column 4, lines 47-66; column 5, lines 1-8; and FIG. 1. While switches 32 and 42 may be helpful for identifying a starting point for building a layer of cartons 12, and detector 64 may be helpful for sensing the presence of a previously placed row of cartons 12, none of switches and detectors 32, 42, 56, 58, 62, and 64 is placed so as to define the ending point of a layer of cartons 12, that is, the position of the leftmost edge of pallet 14 (the edge closest to vertical support column 16 in FIG. 1). Since the ending point for a layer of cartons 12 is not defined by switches and detectors 32, 42, 56, 58,

62, and 64, switches and detectors 32, 42, 56, 58, 62, and 64 do not define a horizontal area to be filled by cartons 12.

Along those same lines, it is not apparent how switches and detectors 32, 42, 56, 58, 62, and 64 in Becicka could possibly define a vertical area to be filled by all of the layers of cartons 12, and determine when that area has been filled (i.e., when the load is completed). Palletizer 10 builds the load from the bottom layer up. *See Id.* at column 5, lines 9-25. However, none of switches and detectors 32, 42, 56, 58, 62, and 64 is placed so as to define a load height or fill limit, or otherwise determine when such limit has been reached by the top layer of cartons 12. Thus, switches and detectors 32, 42, 56, 58, 62, and 64 are not used to define the vertical area to be filled, or to determine when the vertical area has been filled by cartons 12.

Becicka teaches away from use of switches for such a purpose and instead discloses that

> [p]rogramming of the control system involves entering various predetermined operational data, such as the number of the cartons 12 per row; the orientation of each of the cartons 12 within the row, spacing (per user requirements) between the adjacent cartons 12 within the row and the total number of the cartons 12 for a fully loaded form of the pallet 14 . . . . Control of the robotic palletizer 10 is thus effectuated in accordance with execution of the computer program instructions which utilize the predetermined operational data input by the user and the control signal information as the variable parameters.

Id. at column 4, lines 30-45. In other words, the area to be filled, which corresponds to the total number of cartons 12 in a full load, is predetermined operational data that is programmed or entered into the control system, and palletizer 10 is controlled with regard to this preprogrammed data and does not rely on switches and detectors 32, 42,

56, 58, 62, and 64 to define an area to be filled and/or determine when such an area is filled.

Thus, while switches and detectors 32, 42, 56, 58, 62, and 64 in palletizer 10 may assist with filling an area with cartons 12, those switches and detectors do not define the area to be filled, or determine when that area has been filled. That information is programmed into the control system. Accordingly, Becicka fails to teach "defining a desired area of a load to be filled with product using at least two of a height sensor, a length sensor, and a width sensor . . . and determining when the desired area is filled using at least two of the height sensor, the length sensor, and the width sensor," as recited in independent claim 24. Appellant respectfully requests that this rejection be withdrawn.

Claims 25-31, 38, 43, 44, 46, and 47 depend either directly or indirectly from independent claim 24, and therefore are allowable for at least the same reasons that independent claim 24 is allowable. In addition, at least some of these claims recite unique combinations that are neither taught nor suggested by the cited art, and are therefore also separately patentable.

Rejection of Claims 32 and 45 as Obvious

The rejection of claims 32 and 45 under 35 U.S.C. § 103(a) over Becicka is also improper and, as such, should be withdrawn. As discussed above, Becicka fails to teach or suggest each of the limitations in independent claim 24, from which claims 32 and 45 depend. Even if photodetectors 56 and 58 can be adjusted, as suggested on page 3 of the Office Action, such a modification would not remedy the deficiencies of Becicka set forth in the discussion of independent claim 24. Therefore, claims 32

and 45 are allowable at least for the same reasons that independent claim 24 is allowable.

2) The Rejection Of Claims 48-50, 54, 62, and 65 Under 35 U.S.C. § 102(b) as Being Anticipated by Becicka Should be Withdrawn

The Examiner rejected claims 48-50, 54, 62, and 65 under 35 U.S.C. § 102(b) as being anticipated by Becicka. The Board should reverse the rejection because Becicka fails to teach each and every element recited in those claims. The arguments that follow make reference to descriptions and figures in Becicka, including those discussed above in section B.

Independent claim 48 recites, *inter alia*, "automatically determining when the load is completely built using at least two of a height sensor, a length sensor, and a width sensor."

On page 2 of the Office Action, the Examiner contends that Becicka discloses "defining desired area of a load to be filled with products using at least two of a height sensor 62, a length sensor 56/58, and a width sensor 64. The method comprises automatically filling the desired area with products and determining when the desired area is filled."

The Examiner's contentions are not supported by Becicka. As discussed above with respect to independent claim 24, switches and detectors 32, 42, 56, 58, 62, and 64 in Becicka are not and cannot be used to determine when a load is completely built. Palletizer 10 builds the load from the bottom layer up. *See* Becicka at column 5, lines 9-25. None of switches and detectors 32, 42, 56, 58, 62, and 64 are placed so as to define a load height or fill limit, or otherwise determine when such a limit has been

reached by the top layer of cartons 12. Thus, switches and detectors 32, 42, 56, 58, 62, and 64 are not used to determine when a load has been completely built.

Becicka teaches away from use of switches for such a purpose and instead discloses that

> [p]rogramming of the control system involves entering various predetermined operational data, such as the number of the cartons 12 per row; the orientation of each of the cartons 12 within the row, spacing (per user requirements) between the adjacent cartons 12 within the row and the total number of the cartons 12 for a fully loaded form of the pallet 14 . . . . Control of the robotic palletizer 10 is thus effectuated in accordance with execution of the computer program instructions which utilize the predetermined operational data input by the user and the control signal information as the variable parameters.

Id. at column 4, lines 30-45. In other words, the total number of cartons 12 for a load that has been completely built, is predetermined operational data that is programmed or entered into the control system, and is not determined using switches and detectors 32, 42, 56, 58, 62, and 64.

Thus, while switches and detectors 32, 42, 56, 58, 62, and 64 in palletizer 10 may assist with filling an area with cartons 12, those switches and detectors do not determine when that area has been filled. That information is programmed into the control system. Accordingly, Becicka fails to teach "automatically determining when the load is completely built using at least two of a height sensor, a length sensor, and a width sensor," as recited in independent claim 48. Appellant respectfully requests that this rejection be withdrawn.

Claim 48 also requires "automatically repeating the moving and depositing steps by repeating a single logic sequence for at least two consecutive moving and depositing steps." Becicka discloses that does not disclose or suggest this element of claim 48.

For this additional reason, Appellant respectfully requests that this rejection be withdrawn.

Appellant's specification, at page 39, lines 8-15 in paragraph [0119], provides, "[b]ecause the palletizer fills a pre-defined volume, it is not required to count or track the position of placed product. Nor is it required to be reprogrammed or adjusted when the size of product units changes. Hence, each transporting cycle may follow the same logic sequence." On the other hand, a conventional palletizer that does not fill a pre-defined volume, and instead is programmed with a sequence to build a load by placing product units in assigned locations, may suffer from deficiencies discussed in Appellant's specification, at pages 2 and 3, lines 1-12 in paragraph [004]; and at page 3, lines 1-7 in paragraph [005].

As discussed above, while switches and detectors 32, 42, 56, 58, 62, and 64 in palletizer 10 of Becicka may assist with filling an area with cartons 12, those switches and detectors do not determine when that area has been filled. That information is programmed into the control system. *See* Becicka, at column 4, lines 30-45. Moreover, Becicka explicitly states that the palletizer is "operable to automatically place and arrangement a plurality of objects in a predetermined pattern on a pallet" (emphasis added). *See id.* at column 1, lines 49-51. Thus, Becicka is similar to a conventional palletizer programmed with different sequences to build a load by placing product units in assigned locations. At best, Becicka is entirely silent as to whether a single logic sequence is repeated, and for this, and the reasons provided above, the rejection of independent claim 48 over Becicka should be withdrawn.

Claims 49, 50, 54, 62, and 65 depend either directly or indirectly from independent claim 48, and therefore are allowable for at least the same reasons that independent claim 48 is allowable. In addition, at least some of these claims recite unique combinations that are neither taught nor suggested by the cited art, and are therefore also separately patentable.

Rejection of Claims 51-53 and 66 as Obvious

The rejection of claims 51-53 and 66 under 35 U.S.C. § 103(a) over Becicka is also improper and, as such, should be withdrawn. As discussed above, Becicka fails to teach or suggest each of the limitations in independent claim 48, from which claims 51-53 and 66 depend. Even if photodetectors 56 and 58 can be adjusted, as suggested on page 3 of the Office Action, such a modification would not remedy the deficiencies of Becicka set forth in the discussion of independent claim 48. Therefore, claims 51-53 and 66 are allowable at least for the same reasons that independent claim 48 is allowable.

3) The Rejection Of Claims 67-71, 83, and 86 Under 35 U.S.C. § 102(b) as Being Anticipated by Becicka Should be Withdrawn

The Examiner rejected claims 67-71, 83, and 86 under 35 U.S.C. § 102(b) as being anticipated by Becicka. The Board should reverse the rejection because Becicka fails to teach each and every element recited in those claims.

Independent claim 67 recites, *inter alia*, "automatically determining when the load is completely built using at least two of a height sensor, a length sensor, and a width sensor." As discussed above with regard to both claims 24 and 48, Becicka does not disclose or suggest this element. Claim 67 also requires "automatically repeating the

transporting step by repeating a single logic sequence for at least two consecutive transporting cycles." Becicka also does not disclose or suggest this element, as discussed above with respect to independent claim 48. For this additional reason, Appellant respectfully requests that this rejection be withdrawn.

Claims 68-71, 83, and 86 depend either directly or indirectly from independent claim 67, and therefore are allowable for at least the same reasons that independent claim 67 is allowable. In addition, at least some of these claims recite unique combinations that are neither taught nor suggested by the cited art, and are therefore also separately patentable.

Rejection of Claims 72-74 as Obvious

The rejection of claims 72-74 under 35 U.S.C. § 103(a) over Becicka is also improper and, as such, should be withdrawn. As discussed above, Becicka fails to teach or suggest each of the limitations in independent claim 67, from which claims 72-74 depend. Even if photodetectors 56 and 58 can be adjusted, as suggested on page 3 of the Office Action, such a modification would not remedy the deficiencies of Becicka set forth in the discussion of independent claim 67. Therefore, claims 72-74 are allowable at least for the same reasons that independent claim 67 is allowable.

4) The Rejection Of Claim 173 Under 35 U.S.C. § 102(b) as Being Anticipated by Becicka Should be Withdrawn

The Examiner rejected claim 173 under 35 U.S.C. § 102(b) as being anticipated by Becicka. The Board should reverse the rejection because Becicka fails to teach each and every element recited in the claim.

Independent claim 173 recites, *inter alia*, "defining a desired area of a load to be filled with product using at least two of a height sensor, a length sensor, and a width sensor . . . and determining when the desired area is filled using at least two of the height sensor, the length sensor, and the width sensor."

On page 2 of the Office Action, the Examiner contends that Becicka discloses "defining desired area of a load to be filled with products using at least two of a height sensor 62, a length sensor 56/58, and a width sensor 64. The method comprises automatically filling the desired area with products and determining when the desired area is filled."

The Examiner's contentions are not supported by Becicka. It is not apparent how switches and detectors 32, 42, 56, 58, 62, and 64 in Becicka could possibly define a horizontal area to be filled by a layer of cartons 12, and determine when that area has been filled. Palletizer 10 builds the first layer of cartons 12 by placing the first row of cartons 12 (the bottom right row in FIG. 1) with the help of limit switches 32 and 42, then placing the next two rows of cartons 12 (the bottom middle and the bottom left rows in FIG. 1) with the help of limit switch 32 and proximity detector 64, with each subsequent row being placed closer to vertical support column 16 than the one before. *See* Becicka at column 4, lines 47-66; column 5, lines 1-8; and FIG. 1. While switches 32 and 42 may be helpful for identifying a starting point for building a layer of cartons 12, and detector 64 may be helpful for sensing the presence of a previously placed row of cartons 12, none of switches and detectors 32, 42, 56, 58, 62, and 64 is placed so as to define the ending point of a layer of cartons 12, that is, the position of the leftmost edge of pallet 14 (the edge closest to vertical support column 16 in FIG. 1). Since the ending

point for a layer of cartons 12 is not defined by switches and detectors 32, 42, 56, 58, 62, and 64, switches and detectors 32, 42, 56, 58, 62, and 64 do not define a horizontal area to be filled by cartons 12.

Along those same lines, it is not apparent how switches and detectors 32, 42, 56, 58, 62, and 64 in Becicka could possibly define a vertical area to be filled by all of the layers of cartons 12, and determine when that area has been filled (i.e., when the load is completed). Palletizer 10 builds the load from the bottom layer up. *See Id.* at column 5, lines 9-25. However, none of switches and detectors 32, 42, 56, 58, 62, and 64 is placed so as to define a load height or fill limit, or otherwise determine when such limit has been reached by the top layer of cartons 12. Thus, switches and detectors 32, 42, 56, 58, 62, and 64 are not used to define the vertical area to be filled, or to determine when the vertical area has been filled by cartons 12.

If switches and detectors 32, 42, 56, 58, 62, and 64 in Becicka are not used to define the area to be filled, or determine when an area is filled, then how does palletizer 10 know when to stop loading cartons 12 onto pallet 14? Becicka states,

> [p]rogramming of the control system involves entering various predetermined operational data, such as the number of the cartons 12 per row; the orientation of each of the cartons 12 within the row, spacing (per user requirements) between the adjacent cartons 12 within the row and the total number of the cartons 12 for a fully loaded form of the pallet 14 . . . . Control of the robotic palletizer 10 is thus effectuated in accordance with execution of the computer program instructions which utilize the predetermined operational data input by the user and the control signal information as the variable parameters.

Id. at column 4, lines 30-45. In other words, the area to be filled, which corresponds to the total number of cartons 12 in a full load, is predetermined operational data that is programmed or entered into the control system, and palletizer 10 is controlled with

regard to this preprogrammed data and does not rely on switches and detectors 32, 42, 56, 58, 62, and 64 to define an area to be filled and/or determine when such an area is filled.

Thus, while switches and detectors 32, 42, 56, 58, 62, and 64 in palletizer 10 may assist with filling an area with cartons 12, those switches and detectors do not define the area to be filled, or determine when that area has been filled. That information is programmed into the control system. Accordingly, Becicka fails to teach "defining a desired area of a load to be filled with product using at least two of a height sensor, a length sensor, and a width sensor . . . and determining when the desired area is filled using at least two of the height sensor, the length sensor, and the width sensor," as recited in independent claim 173. Appellant respectfully requests that this rejection be withdrawn.

Independent claim 173 also requires "automatically filling the desired area with product by executing a first logic sequence in a controller, and repeating the first logic sequence for at least two transporting cycles, and executing a second logic sequence in the controller for a different transporting cycle while building the load." Becicka does not disclose or suggest this element. On page 3 of the Office Action, the Examiner contends that Becicka discloses this feature in column 5, lines 29-34. Appellant submits that there is no support for the Examiner's contention. In column 5, lines 29-32, Becicka discloses that "[i]f it is desired to form an interlocking load pattern on the pallet 14, the control circuitry actuates the case turner 60 so as to turn the cartons 12 in alternate rows prior to accumulation and thereby form a desired interlocking pattern on the pallet 14." Becicka is silent as to whether palletizer 10 executes a first logic sequence and a

second logic sequence. If, for the sake of argument, placing cartons 12 in a row in one orientation can somehow be interpreted as corresponding to a first logic sequence, and placing cartons 12 in a row in a second orientation can somehow be interpreted as corresponding to a second logic sequence (as the Examiner seems to suggest), Becicka would still fail because Becicka does not disclose or suggest that the first logic sequence is repeated for at least two transporting cycles, as required by independent claim 173. For this additional reason, Appellant respectfully requests that this rejection be withdrawn.

C. Obviousness Rejections

"The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. . . . [R]ejections on obviousness cannot be sustained with mere conclusory statements." M.P.E.P. § 2142, 8th Ed., Rev. 6 (Sept. 2007) (internal citation and inner quotation omitted). "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art." M.P.E.P. § 2143.01(III) (emphasis in original). "All words in a claim must be considered in judging the patentability of that claim against the prior art." M.P.E.P. § 2143.03. "In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious." M.P.E.P. § 2141.02(I) (emphases in original).

"[T]he framework for objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q 459

(1966). . . . The factual inquiries . . . [include determining the scope and content of the prior art and] . . . [a]scertaining the differences between the claimed invention and the prior art." M.P.E.P. § 2141(II). "Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art." M.P.E.P. § 2141(III).

1) The Rejection Of Claims 174 and 175 Under 35 U.S.C. § 103(a) as Being Unpatentable Over Becicka Should be Withdrawn

The Examiner rejected claims 174 and 175 under 35 U.S.C. § 103(a) as being unpatentable over Becicka. The Board should reverse the rejection because Becicka fails to render those claims *prima facie* obvious. A *prima facie* case of obviousness has not been established because the Examiner has neither articulated the reasons why the claimed invention would have been obvious, properly determined the scope and content of the prior art, nor properly ascertained the differences between the claimed invention and the prior art.

Independent claim 174 requires, for example, "defining a desired area of a load to be filled with product using a height sensor and at least one of a length sensor and a width sensor, wherein using the height sensor includes positioning the height sensor to set a desired height of the load . . . and determining when the desired area is filled."

As discussed above with respect to independent claim 24, it is not apparent how switches and detectors 32, 42, 56, 58, 62, and 64 in Becicka could possibly be capable of "defining a desired area of a load to be filled with product using a height sensor and at least one of a length sensor and a width sensor, wherein using the height sensor includes positioning the height sensor to set a desired height of the load . . . and

determining when the desired area is filled." In Becicka, palletizer 10 builds the first layer of cartons 12 by placing the first row of cartons 12 (the bottom right row in FIG. 1) with the help of limit switches 32 and 42, then placing the next two rows of cartons 12 (the bottom middle and the bottom left rows in FIG. 1) with the help of limit switch 32 and proximity detector 64, with each subsequent row being placed closer to vertical support column 16 than the one before. *See* Becicka at column 4, lines 47-66; column 5, lines 1-8; and FIG. 1. While switches 32 and 42 may be helpful for identifying a starting point for building a layer of cartons 12, and detector 64 may be helpful for sensing the presence of a previously placed row of cartons 12, none of switches and detectors 32, 42, 56, 58, 62, and 64 is placed so as to define the ending point of a layer of cartons 12, that is, the position of the leftmost edge of pallet 14 (the edge closest to vertical support column 16 in FIG. 1). Since the ending point for a layer of cartons 12 is not defined by switches and detectors 32, 42, 56, 58, 62, and 64, switches and detectors 32, 42, 56, 58, 62, and 64 do not define a horizontal area to be filled by cartons 12.

Along those same lines, it is not apparent how switches and detectors 32, 42, 56, 58, 62, and 64 in Becicka could possibly define a vertical area to be filled by all of the layers of cartons 12, set a desired height of the load, and determine when that area has been filled (i.e., when the load is completed). Palletizer 10 builds the load from the bottom layer up. *See Id.* at column 5, lines 9-25. However, none of switches and detectors 32, 42, 56, 58, 62, and 64 is placed so as to define a load height or fill limit, or otherwise determine when such limit has been reached by the top layer of cartons 12. Thus, switches and detectors 32, 42, 56, 58, 62, and 64 are not used to define the

vertical area to be filled, set a desired height of the load, or determine when the vertical area has been filled by cartons 12.

Becicka teaches away from use of switches for such a purpose and instead discloses that

> [p]rogramming of the control system involves entering various predetermined operational data, such as the number of the cartons 12 per row; the orientation of each of the cartons 12 within the row, spacing (per user requirements) between the adjacent cartons 12 within the row and the total number of the cartons 12 for a fully loaded form of the pallet 14 . . . . Control of the robotic palletizer 10 is thus effectuated in accordance with execution of the computer program instructions which utilize the predetermined operational data input by the user and the control signal information as the variable parameters.

Id. at column 4, lines 30-45. In other words, the area to be filled, which corresponds to the total number of cartons 12 for a full load, is predetermined operational data that is programmed or entered into the control system, and is not defined and determined using switches and detectors 32, 42, 56, 58, 62, and 64.

Thus, while switches and detectors 32, 42, 56, 58, 62, and 64 in palletizer 10 may assist with filling an area with cartons 12, those switches and detectors do not define the area to be filled, set a desired height of the load, or determine when that area has been filled. That information is programmed into the control system. In view of the mischaracterization of Becicka above, the Examiner has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the claimed invention and the prior art. Thus, the Examiner has failed to clearly articulate a reason why the prior art would have rendered the claimed invention obvious to one of ordinary skill in the art. Accordingly, a *prima facie* case of obviousness has

not been established with respect to independent claim 174, and the rejection under 35 U.S.C. § 103(a) must be withdrawn.

Moreover, it would not have been obvious to modify Becicka to define a desired area of a load to be filled, set a desired height of the load, or determine when the area has been filled, using switches and detectors 32, 42, 56, 58, 62, and 64, since that information is programmed into the control system, and making such a modification would change the principle of operation of Becicka. Also, there would be no motivation to do so. For at least these additional reasons, a *prima facie* case of obviousness has not been established. *See* M.P.E.P. § 2143.01.

Claim 175 depends directly from independent claim 174, and therefore is allowable for at least the same reasons that independent claim 174 is allowable. In addition, claim 175 recites a unique combination that is neither taught nor suggested by the cited art, and is therefore also separately patentable.

2) The Rejection Of Claims 176 and 177 Under 35 U.S.C. § 103(a) as Being Unpatentable Over Becicka Should be Withdrawn

The Examiner rejected claims 176 and 177 under 35 U.S.C. § 103(a) as being unpatentable over Becicka. The Board should reverse the rejection because Becicka fails to render those claims *prima facie* obvious.

Independent claim 176 recites a method including, for example, "automatically moving a product . . . automatically depositing the product . . . automatically repeating the moving and depositing steps . . . wherein the first moving and first depositing steps load a first product having a first size onto the load, and wherein the second moving and

second depositing steps load a second product having a second size different from the first size onto the load; and automatically determining when the load is completely built."

On page 4 of the Office Action, the Examiner contends that "[i]t is obvious that Becicka et al. '254 controller is programmable to accommodate for the loading of different size items on different layers of a single pallet load. For example, new products having half the size of previously loaded products could be placed on a next layer row having twice as many products."

These contentions are mere conclusory statements, and furthermore, are not supported by Becicka. Becicka only shows items of a single size in the load shown in FIG. 1. Nor does Becicka comment that the size of cartons 12 may vary. Thus, at best, Becicka is silent with respect to size. Further, palletizer 10 would not work if differently sized cartons 12 were to be used, since proximity detectors 62 and 64 appear to operate on the assumption that the rows and layers, and thus cartons 12 forming the rows and layers, have uniform dimensions. *See* Becicka at column 5, lines 1-19. For at least this reason, the Examiner's rejection is improper and should be withdrawn.

Moreover, as discussed above with respect to independent claim 174, it is not apparent how switches and detectors 32, 42, 56, 58, 62, and 64 in Becicka could possibly determine when a load has been completely built. Becicka explicitly discloses that the total number of cartons 12 for a full load is predetermined operational data that is programmed or entered into the control system, and is not determined using switches and detectors 32, 42, 56, 58, 62, and 64. *Id.* at column 4, lines 30-45.

Thus, while switches and detectors 32, 42, 56, 58, 62, and 64 in palletizer 10 may assist with filling an area with cartons 12, those switches and detectors do not

determine when the load has been completely built. That information is programmed. In view of the above mischaracterizations of Becicka, the Examiner has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the invention of independent claim 176. Thus, the Examiner has failed to clearly articulate a reason why independent claim 176 would have been obvious to one of ordinary skill in the art in view of the prior art. Accordingly, a *prima facie* case of obviousness has not been established with respect to independent claim 176, and the rejection under 35 U.S.C. § 103(a) must be withdrawn.

Moreover, it would not have been obvious to modify Becicka to determine when the load has been completely built, using switches and detectors 32, 42, 56, 58, 62, and 64, since that information is programmed into the control system, and making such a modification would change the principle of operation of Becicka. Also, there is no motivation to do so. For at least these additional reasons, a *prima facie* case of obviousness has not been established. *See* M.P.E.P. § 2143.01.

Claim 177 depends directly from independent claim 176, and therefore is allowable for at least the same reasons that independent claim 176 is allowable. In addition, claim 177 recites a unique combination that is neither taught nor suggested by the cited art, and is therefore also separately patentable.

3) The Rejection Of Claims 178-180 Under 35 U.S.C. § 103(a) as Being Unpatentable Over Becicka Should be Withdrawn

The Examiner rejected claims 178-180 under 35 U.S.C. § 103(a) as being unpatentable over Becicka. The Board should reverse the rejection because Becicka fails to render those claims *prima facie* obvious. A *prima facie* case of obviousness has

not been established because the Examiner has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the claimed invention and the prior art. Accordingly, the Examiner has failed to clearly articulate a reason why the prior art would have rendered the claimed invention obvious to one of ordinary skill in the art.

Independent claim 178 requires, for example, "defining a desired space to be filled with product by physically establishing at least two of a height threshold, a length threshold, and a width threshold . . . and automatically signaling that the desired space is filled when product reaches at least two of the height threshold, the length threshold, and the width threshold."

The Office Action omits any explanation of how or where the features above are taught or suggested by Becicka. As such, the Examiner has failed to clearly articulate a reason why independent claim 178 would have been obvious to one of ordinary skill in the art in view of the prior art. Mere conclusory statements are improper grounds for making an obviousness rejection. Accordingly, a *prima facie* case of obviousness has not been established with respect to independent claim 178, and the rejection under 35 U.S.C. § 103(a) must be withdrawn.

Becicka is, at best, silent as to the establishment of thresholds. In Becicka, palletizer 10 builds the first layer of cartons 12 by placing the first row of cartons 12 (the bottom right row in FIG. 1) with the help of limit switches 32 and 42, then placing the next two rows of cartons 12 (the bottom middle and the bottom left rows in FIG. 1) with the help of limit switch 32 and proximity detector 64, with each subsequent row being placed closer to vertical support column 16 than the one before. *See* Becicka at

column 4, lines 47-66; column 5, lines 1-8; and FIG. 1. While switches 32 and 42 may be helpful for identifying a starting point for building a layer of cartons 12, detector 62 may be helpful for sensing the presence of a previously placed layer of cartons 12, and detector 64 may be helpful for sensing the presence of a previously placed row of cartons 12, none of switches and detectors 32, 42, 56, 58, 62, and 64 is placed so as to physically establish load thresholds. Moreover, none of switches and detectors 32, 42, 56, 58, 62, and 64 is placed to signal when cartons 12 reach at least two load thresholds.

Becicka teaches away from use of switches for such a purpose and instead discloses that

> [p]rogramming of the control system involves entering various predetermined operational data, such as the number of the cartons 12 per row; the orientation of each of the cartons 12 within the row, spacing (per user requirements) between the adjacent cartons 12 within the row and the total number of the cartons 12 for a fully loaded form of the pallet 14 . . . . Control of the robotic palletizer 10 is thus effectuated in accordance with execution of the computer program instructions which utilize the predetermined operational data input by the user and the control signal information as the variable parameters.

Id. at column 4, lines 30-45. In other words, the desired space to be filled, which corresponds to the total number of cartons 12 in a full load, is predetermined operational data that is programmed or entered into the control system, and is not physically established using switches and detectors 32, 42, 56, 58, 62, and 64.

Thus, while switches and detectors 32, 42, 56, 58, 62, and 64 in palletizer 10 may assist with filling an area with cartons 12, those switches and detectors do not physically establish at least two load thresholds, or signal when cartons 12 reach at least two thresholds. That information is programmed into the control system.

Accordingly, Becicka fails to teach or suggest "defining a desired space to be filled with product by physically establishing at least two of a height threshold, a length threshold, and a width threshold . . . and automatically signaling that the desired space is filled when product reaches at least two of the height threshold, the length threshold, and the width threshold," as recited in independent claim 178.

In view of the mischaracterizations of Becicka, above, the Examiner has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the invention of independent claim 178. Thus, the Examiner has failed to clearly articulate a reason why independent claim 178 would have been obvious to one of ordinary skill in the art in view of the prior art. Accordingly, a *prima facie* case of obviousness has not been established with respect to independent claim 178, and the rejection under 35 U.S.C. § 103(a) must be withdrawn.

Moreover, it would not have been obvious to modify Becicka to physically establish at least two thresholds, or signal when at least two thresholds have been reached, using switches and detectors 32, 42, 56, 58, 62, and 64, since that information is programmed into the control system, and making such a modification would change the principle of operation of Becicka. Also, there would be no motivation to do so. For at least these additional reasons, a *prima facie* case of obviousness has not been established. *See* M.P.E.P. § 2143.01.

Claims 179 and 180 depend directly from independent claim 178, and therefore are allowable for at least the same reasons that independent claim 178 is allowable. In addition, at least some of these claims recite unique combinations that are neither taught nor suggested by the cited art, and are therefore also separately patentable.

4) The Rejection Of Claims 182-187 Under 35 U.S.C. § 103(a) as Being Unpatentable Over Becicka Should be Withdrawn

The Examiner rejected claims 182-187 under 35 U.S.C. § 103(a) as being unpatentable over Becicka. The Board should reverse the rejection because Becicka fails to render those claims *prima facie* obvious. A *prima facie* case of obviousness has not been established because the Examiner has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the claimed invention and the prior art. Accordingly, the Examiner has failed to clearly articulate a reason why the prior art would have rendered the claimed invention obvious to one of ordinary skill in the art.

Independent claim 182 recites, for example, "defining boundaries of a desired area of a load to be filled with product by physically establishing at least two of a load height, a load length, and a load width . . . and automatically signaling when the desired area is filled when product reaches at least two of the load height, the load length, and the load width."

The Office Action omits any explanation of how or where the features above are taught or suggested by Becicka. As such, the Examiner has failed to clearly articulate a reason why independent claim 182 would have been obvious to one of ordinary skill in the art in view of the prior art. Mere conclusory statements are improper grounds for making an obviousness rejection.

It is not apparent what in Becicka can defined boundaries of a desired area of a load to be filled by physically establishing at least two load dimensions. While switches 32 and 42 may be helpful for identifying a starting point for building a layer of cartons 12, detector 62 may be helpful for sensing the presence of a previously placed

layer of cartons 12, and detector 64 may be helpful for sensing the presence of a previously placed row of cartons 12, none of switches and detectors 32, 42, 56, 58, 62, and 64 is placed so as to physically establish at least two load dimensions. *See* Becicka at column 4, lines 47-66; column 5, lines 1-8; and FIG. 1. Moreover, none of switches and detectors 32, 42, 56, 58, 62, and 64 is placed to signal when cartons 12 reach at least two of the load dimensions.

Becicka teaches away from use of switches for such a purpose and instead discloses that

> [p]rogramming of the control system involves entering various predetermined operational data, such as the number of the cartons 12 per row; the orientation of each of the cartons 12 within the row, spacing (per user requirements) between the adjacent cartons 12 within the row and the total number of the cartons 12 for a fully loaded form of the pallet 14 . . . . Control of the robotic palletizer 10 is thus effectuated in accordance with execution of the computer program instructions which utilize the predetermined operational data input by the user and the control signal information as the variable parameters.

Id. at column 4, lines 30-45. In other words, the boundaries of a desired area to be filled, which corresponds to the total number of cartons 12 in a full load, is predetermined operational data that is programmed or entered into the control system, and is not physically established using switches and detectors 32, 42, 56, 58, 62, and 64.

Thus, while switches and detectors 32, 42, 56, 58, 62, and 64 in palletizer 10 may assist with filling an area with cartons 12, those switches and detectors do not physically establish at least two load dimensions, or signal when cartons 12 reach at least two load dimensions. That information is programmed into the control system. In view of these mischaracterizations of Becicka, the Examiner has neither properly

determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the invention of independent claim 182. Thus, the Examiner has failed to clearly articulate a reason why independent claim 182 would have been obvious to one of ordinary skill in the art in view of the prior art. Accordingly, a *prima facie* case of obviousness has not been established with respect to independent claim 182, and the rejection under 35 U.S.C. § 103(a) must be withdrawn.

Moreover, it would not have been obvious to modify Becicka to physically establish at least two load dimensions, or signal when at least two load dimensions have been reached, using switches and detectors 32, 42, 56, 58, 62, and 64, since that information is programmed into the control system, and making such a modification would change the principle of operation of Becicka. Also, there is no motivation to do so. For at least these additional reasons, a *prima facie* case of obviousness has not been established. *See* M.P.E.P. § 2143.01.

Claims 183-187 depend either directly or indirectly from independent claim 182, and therefore are allowable for at least the same reasons that independent claim 182 is allowable. In addition, at least some of these claims recite unique combinations that are neither taught nor suggested by the cited art, and are therefore also separately patentable.

5) The Rejection Of Claims 189-194 Under 35 U.S.C. § 103(a) as Being Unpatentable Over Becicka Should be Withdrawn

The Examiner rejected claims 189-194 under 35 U.S.C. § 103(a) as being unpatentable over Becicka. The Board should reverse the rejection because Becicka fails to render those claims *prima facie* obvious. A *prima facie* case of obviousness has

not been established because the Examiner has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the claimed invention and the prior art. Accordingly, the Examiner has failed to clearly articulate a reason why the prior art would have rendered the claimed invention obvious to one of ordinary skill in the art.

Independent claim 189 requires, for example, "defining a desired area of a load to be filled with product by establishing physical markers delimiting at least two of a load height, a load length, and a load width . . . and automatically signaling when the desired area is filled when product reaches at least two of the load height, the load length, and the load width."

The Office Action omits any explanation of how or where the features above are taught or suggested by Becicka. As such, the Examiner has failed to clearly articulate a reason why independent claim 189 would have been obvious to one of ordinary skill in the art in view of the prior art. Mere conclusory statements are improper grounds for making an obviousness rejection.

It is not apparent what in Becicka can define a desired area of a load to be filled with product by establishing physical markers delimiting at least two load dimensions. While switches 32 and 42 may be helpful for identifying a starting point for building a layer of cartons 12, detector 62 may be helpful for sensing the presence of a previously placed layer of cartons 12, and detector 64 may be helpful for sensing the presence of a previously placed row of cartons 12, none of switches and detectors 32, 42, 56, 58, 62, and 64 is placed so as to delimit at least two load dimensions. *See* Becicka at column 4, lines 47-66; column 5, lines 1-8; and FIG. 1. Moreover, none of switches and

detectors 32, 42, 56, 58, 62, and 64 is placed to signal when cartons 12 reach at least two of the load dimensions.

Becicka teaches away from use of switches for such a purpose and instead discloses that

> [p]rogramming of the control system involves entering various predetermined operational data, such as the number of the cartons 12 per row; the orientation of each of the cartons 12 within the row, spacing (per user requirements) between the adjacent cartons 12 within the row and the total number of the cartons 12 for a fully loaded form of the pallet 14 . . . . Control of the robotic palletizer 10 is thus effectuated in accordance with execution of the computer program instructions which utilize the predetermined operational data input by the user and the control signal information as the variable parameters.

Id. at column 4, lines 30-45. In other words, the desired area of a load to be filled, which corresponds to the total number of cartons 12 in a full load, is predetermined operational data that is programmed or entered into the control system, and is not delimited using switches and detectors 32, 42, 56, 58, 62, and 64.

Thus, while switches and detectors 32, 42, 56, 58, 62, and 64 in palletizer 10 may assist with filling an area with cartons 12, those switches and detectors do not delimit at least two load dimensions, or signal when cartons 12 reach at least two load dimensions. That information is programmed into the control system. In view of these mischaracterizations of Becicka, the Examiner has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the invention of independent claim 189. Thus, the Examiner has failed to clearly articulate a reason why independent claim 189 would have been obvious to one of ordinary skill in the art in view of the prior art. Accordingly, a *prima facie* case of

obviousness has not been established with respect to independent claim 189, and the rejection under 35 U.S.C. § 103(a) must be withdrawn.

Moreover, it would not have been obvious to modify Becicka to define a desired area to be filled with cartons 12 by establishing physical markers delimiting load dimensions, or signal when at least two load dimensions have been reached by cartons 12, using switches and detectors 32, 42, 56, 58, 62, and 64, since that information is programmed into the control system, and making such a modification would change the principle of operation of Becicka. Also, there would be no motivation to do so. For at least this additional reason, a *prima facie* case of obviousness has not been established. *See* M.P.E.P. § 2143.01.

Claims 190-194 depend either directly or indirectly from independent claim 189, and therefore are allowable for at least the same reasons that independent claim 189 is allowable. In addition, at least some of these claims recite unique combinations that are neither taught nor suggested by the cited art, and are therefore also separately patentable.

6) The Rejection Of Claims 196-199 Under 35 U.S.C. § 103(a) as Being Unpatentable Over Becicka Should be Withdrawn

The Examiner rejected claims 196-199 under 35 U.S.C. § 103(a) as being unpatentable over Becicka. The Board should reverse the rejection because Becicka fails to render those claims *prima facie* obvious. A *prima facie* case of obviousness has not been established because the Examiner has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the claimed invention and the prior art. Accordingly, the Examiner has failed to clearly

articulate a reason why the prior art would have rendered the claimed invention obvious to one of ordinary skill in the art.

Independent claim 196 requires, for example, "automatically filling in the boundary with product, wherein the height dimension, the length dimension, and the width dimension of the load remain substantially constant as product characteristics vary."

The Office Action omits any explanation of how or where the features above are taught or suggested by Becicka. As such, the Examiner has failed to clearly articulate a reason why independent claim 196 would have been obvious to one of ordinary skill in the art in view of the prior art. Mere conclusory statements are improper grounds for making an obviousness rejection. Accordingly, a *prima facie* case of obviousness has not been established with respect to independent claim 196, and the rejection under 35 U.S.C. § 103(a) must be withdrawn.

Further, Becicka does not comment that the characteristics of cartons 12 may vary. Thus, at best, Becicka is silent with respect to varying the characteristics of cartons 12. Becicka appears to teach away from such varying, as evidenced by the uniformity of the characteristics of cartons 12 shown in FIG 1. Hypothetically speaking, even if Becicka could somehow be interpreted as disclosing or suggesting varying the characteristics of cartons 12, Becicka still would not disclose or suggest that the dimensions of the load would remain substantially constant as the characteristics of cartons 12 vary. Becicka appears to teach away from maintaining substantially constant height, length, and width dimensions for the load, since Becicka builds loads based on a preprogrammed total number of cartons 12 in a load, and changing the

characteristics of cartons 12, while maintaining the total number of cartons 12 in a load, would change the dimensions of the load. For at least this reason, the Examiner's rejection is improper and should be withdrawn.

Independent claim 196 also requires, for example, "defining a boundary to be filled in with product by physically setting at least two of a height dimension, a length dimension, and a width dimension of the load . . . and automatically signaling that the boundary is filled in when product reaches at least two of the height dimension, the length dimension, and the width dimension of the load."

The Office Action omits any explanation of how or where the features above are taught or suggested by Becicka. As such, the Examiner has failed to clearly articulate a reason why independent claim 196 would have been obvious to one of ordinary skill in the art in view of the prior art. Mere conclusory statements are improper grounds for making an obviousness rejection.

Also, it is not apparent what in Becicka can be used to physically set at least two load dimensions. While switches 32 and 42 may be helpful for identifying a starting point for building a layer of cartons 12, detector 62 may be helpful for sensing the presence of a previously placed layer of cartons 12, and detector 64 may be helpful for sensing the presence of a previously placed row of cartons 12, none of switches and detectors 32, 42, 56, 58, 62, and 64 is placed so as to physically set at least two load dimensions. *See* Becicka at column 4, lines 47-66; column 5, lines 1-8; and FIG. 1. Moreover, none of switches and detectors 32, 42, 56, 58, 62, and 64 is placed to signal when cartons 12 reach at least two of the load dimensions.

Becicka teaches away from use of switches for such a purpose and instead discloses that

> [p]rogramming of the control system involves entering various predetermined operational data, such as the number of the cartons 12 per row; the orientation of each of the cartons 12 within the row, spacing (per user requirements) between the adjacent cartons 12 within the row and the total number of the cartons 12 for a fully loaded form of the pallet 14 . . . . Control of the robotic palletizer 10 is thus effectuated in accordance with execution of the computer program instructions which utilize the predetermined operational data input by the user and the control signal information as the variable parameters.

Id. at column 4, lines 30-45. In other words, the boundaries of a desired area to be filled, which correspond to the total number of cartons 12 in a full load, is predetermined operational data that is programmed or entered into the control system, and is not physically set using switches and detectors 32, 42, 56, 58, 62, and 64.

Thus, while switches and detectors 32, 42, 56, 58, 62, and 64 in palletizer 10 may assist with filling an area with cartons 12, those switches and detectors do not physically set at least two load dimensions, or signal when cartons 12 reach at least two load dimensions. In view of these mischaracterizations of Becicka, the Examiner has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the invention of independent claim 196. Thus, the Examiner has failed to clearly articulate a reason why independent claim 196 would have been obvious to one of ordinary skill in the art in view of the prior art. Accordingly, a *prima facie* case of obviousness has not been established with respect to independent claim 196, and the rejection under 35 U.S.C. § 103(a) must be withdrawn.

Moreover, it would not have been obvious to modify Becicka to physically set at least two load dimensions, or signal when at least two load dimensions have been reached, using switches and detectors 32, 42, 56, 58, 62, and 64, since that information is programmed into the control system, and making such a modification would change the principle of operation of Becicka. Also, there would be no motivation to do so. For at least these additional reasons, a *prima facie* case of obviousness has not been established. *See* M.P.E.P. § 2143.01.

Claims 197-199 depend directly from independent claim 196, and therefore are allowable for at least the same reasons that independent claim 196 is allowable. In addition, at least some of these claims recite unique combinations that are neither taught nor suggested by the cited art, and are therefore also separately patentable.

7) The Rejection Of Claim 201 Under 35 U.S.C. § 103(a) as Being Unpatentable Over Becicka Should be Withdrawn

The Examiner rejected claim 201 under 35 U.S.C. § 103(a) as being unpatentable over Becicka. The Board should reverse the rejection because Becicka fails to render that claim *prima facie* obvious. A *prima facie* case of obviousness has not been established because the Examiner has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the claimed invention and the prior art. Accordingly, the Examiner has failed to clearly articulate a reason why the prior art would have rendered the claimed invention obvious to one of ordinary skill in the art.

Independent claim 201 also requires, for example, "defining a boundary of a desired area of a first load to be filled with product of a first size by physically

delineating at least two of a desired height of the first load, a desired length of the first load, and a desired width of the first load . . . and automatically filling the desired area with as much product of a second size different from the first size as needed to meet the boundary without adjusting the boundary."

The Office Action omits any explanation of how or where the features above are taught or suggested by Becicka. As such, the Examiner has failed to clearly articulate a reason why independent claim 201 would have been obvious to one of ordinary skill in the art in view of the prior art. Mere conclusory statements are improper grounds for making an obviousness rejection.

Also, it is not apparent what in Becicka can be used to physically delineate at least two desired load dimensions. In Becicka, while switches 32 and 42 may be helpful for identifying a starting point for building a layer of cartons 12, detector 62 may be helpful for sensing the presence of a previously placed layer of cartons 12, and detector 64 may be helpful for sensing the presence of a previously placed row of cartons 12, none of switches and detectors 32, 42, 56, 58, 62, and 64 is placed so as to physically delineate at least two desired load dimensions. *See* Becicka at column 4, lines 47-66; column 5, lines 1-8; and FIG. 1.

Becicka teaches away from use of switches for such a purpose and instead discloses that

> [p]rogramming of the control system involves entering various predetermined operational data, such as the number of the cartons 12 per row; the orientation of each of the cartons 12 within the row, spacing (per user requirements) between the adjacent cartons 12 within the row and the total number of the cartons 12 for a fully loaded form of the pallet 14 . . . . Control of the robotic palletizer 10 is thus effectuated in accordance with execution of the computer program instructions which

> utilize the predetermined operational data input by the user and the control signal information as the variable parameters.

Id. at column 4, lines 30-45. In other words, the boundaries of a desired area to be filled, which correspond to the total number of cartons 12 in a full load, is predetermined operational data that is programmed or entered into the control system, and is not physically delineated using switches and detectors 32, 42, 56, 58, 62, and 64.

Thus, while switches and detectors 32, 42, 56, 58, 62, and 64 in palletizer 10 may assist with filling an area with cartons 12, those switches and detectors do not physically delineate at least two desired load dimensions. That information is programmed into the control system.

Moreover, even if, hypothetically, Becicka could somehow be interpreted as defining a boundary of a desired area to be filled, Becicka is entirely silent as to filling the desired area to meet the boundary without adjusting the boundary. Rather, Becicka appears to teach away from such a feature, since Becicka builds loads based on a preprogrammed values for the total number of cartons 12 in a load, and not based on meeting a boundary.

In view of these mischaracterizations of Becicka, the Examiner has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the invention of independent claim 201. Thus, the Examiner has failed to clearly articulate a reason why independent claim 201 would have been obvious to one of ordinary skill in the art in view of the prior art. Accordingly, a *prima facie* case of obviousness has not been established with respect to independent claim 201, and the rejection under 35 U.S.C. § 103(a) must be withdrawn.

Moreover, it would not have been obvious to modify Becicka to physically delineate at least two desired load dimensions using switches and detectors 32, 42, 56, 58, 62, and 64, since that information is programmed into the control system, and making such a modification would change the principle of operation of Becicka. Also, there would be no motivation to do so. For at least this additional reason, a *prima facie* case of obviousness has not been established. *See* M.P.E.P. § 2143.01.

VIII. Conclusion

For the reasons given above, claims 24-32, 38, 43-54, 62, 65-74, 83, 86, 173-180, 182-187, 189-194, 196-199 and 201 are allowable, and reversal of the Examiner's rejections are respectfully requested.

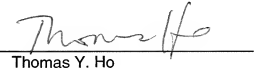
Appellant also requests that withdrawn claims 181, 188, 195, 200, and 202 be rejoined with the elected claims in this application. Claims 181, 188, 195, 200, and 202 all depend either directly or indirectly from one of independent claims 174, 176, 178, 182, 189, 196, and 201, and thus, are allowable for at least the same reasons that independent claims 174, 176, 178, 182, 189, 196, and 201 are allowable. In addition, each of these withdrawn dependent claims recites unique combinations that are neither taught nor suggested by the cited art, and therefore each is also separately patentable.

To the extent any additional extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this Appeal Brief, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to Deposit Account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: August 18, 2008

By: 
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IX. Claims Appendix

1.-23. (Cancelled).

24. (Previously Presented) A method of building a load with product from an infeed area of a palletizer, the method comprising:

defining a desired area of a load to be filled with product using at least two of a height sensor, a length sensor, and a width sensor;

automatically filling the desired area with product; and

determining when the desired area is filled using at least two of the height sensor, the length sensor, and the width sensor.

25. (Previously Presented) The method of claim 24, wherein defining the desired area includes positioning at least one of the length sensor, the width sensor, and the height sensor to define the respective length, width, or height of the desired area.

26. (Original) The method of claim 24, wherein filling the desired area includes sensing the location of previously placed product on the load.

27. (Original) The method of claim 24, wherein filling the desired area includes sensing the location of the pallet.

28. (Original) The method of claim 26, wherein filling the desired area further includes depositing the product upon the sensed location of the product previously placed on the load.

29. (Previously Presented) The method of clam 24, wherein filling the desired area includes sensing a desired location of the product and placing the product to fill the desired area.

30. (Original) The method of claim 24, wherein defining the desired area includes setting a desired height of the load by positioning the height sensor.

31. (Original) The method of claim 24, wherein defining the desired area includes setting a desired length of the load by positioning the length sensor.

32. (Original) The method of claim 31, wherein positioning the length sensor includes adjusting the position of the length sensor to define the length of a product row on a conveyer.

33.-37. (Cancelled).

38. (Previously Presented) The method of claim 24, wherein filling the desired area with product includes executing the same logic sequence in a controller for at least two consecutive transporting cycles.

39.-42. (Cancelled).

43. (Previously Presented) The method of claim 24, wherein determining when the desired area is filled includes monitoring the at least two of the height sensor, the length sensor, and the width sensor for a signal indicating that at least two of a desired height, length, and width of the load is reached.

44. (Previously Presented) The method of claim 43, wherein determining when the desired area is filled further includes receiving a signal from the at least two monitored sensors at a controller.

45. (Original) The method of claim 44, wherein the controller is comprised of more than one processor.

46. (Previously Presented) The method of claim 24, further including pushing a completed load from a loading zone of the palletizer in which the desired area is defined.

47. (Original) The method of claim 24, wherein automatically filling the desired area includes one of placing a product unit on the load to build a row, placing a product row on the load to build a layer, and placing a product layer on the load to build the load.

48. (Previously Presented) A method of building a load with product from an infeed area, the method comprising:

automatically moving a product from the infeed area to a load building area;

automatically depositing the product on the load;

automatically repeating the moving and depositing steps by repeating a single logic sequence for at least two consecutive moving and depositing steps; and

automatically determining when the load is completely built using at least two of a height sensor, a length sensor, and a width sensor.

49. (Original) The method of claim 48, wherein the automatically moving and automatically depositing steps define a transport cycle, and wherein a controller executes the single logic sequence for each transport cycle of the load.

50. (Original) The method of claim 48, wherein the logic sequence is defined in computer executable code configured to be executed by a processor.

51. (Original) The method of claim 48, wherein automatically repeating the automatically moving and automatically depositing steps includes loading a first product having a first size onto a load and loading a second product having a second size onto the same load.

52. (Original) The method of claim 48, wherein repeating the single logic sequence for at least two consecutive moving and depositing steps includes:

moving and depositing a first product having a first size in first moving and depositing steps; and

moving and depositing a second product having a second size in second, successive moving and depositing steps.

53. (Original) The method of claim 48, further including building a second load with second product having a second size, different than the size of the first product, wherein when building the second load, a controller repeats the same single logic sequence.

54. (Original) The method of claim 48, further including sensing a desired location of the product and placing the product on the load.

55.-61. (Cancelled).

62. (Original) The method of claim 48, wherein moving and depositing the product includes executing the single logic sequence in a controller, and repeating the single logic sequence for at least two consecutive transporting cycles.

63. (Cancelled).

64. (Cancelled).

65. (Original) The method of claim 48, wherein determining when the load is completely built includes monitoring at least two of a length, a width, and a height sensor for a signal indicating that at least two of a desired length, a desired width, and a desired height of the load are reached; and

receiving the signal from the at least two monitored sensors at a controller.

66. (Original) The method of claim 65, wherein the controller includes more than one processor.

67. (Previously Presented) A method of building a load with product from an infeed area, the method comprising:

defining a desired area of the load to be filled;

automatically transporting product to the desired area of the load;

automatically repeating the transporting step by repeating a single logic sequence for at least two consecutive transporting cycles; and

automatically determining when the load is completely built using at least two of a height sensor, a length sensor, and a width sensor.

68. (Previously Presented) The method of claim 67, wherein defining a desired area includes positioning first and second sensors to define the desired area.

69. (Original) The method of claim 68, wherein the first and second sensors are one of the following sets of sensors: height and width sensors; height and length sensors; and length and width sensors.

70. (Original) The method of claim 67, further including repeating the single logic sequence for each transporting cycle of the load.

71. (Original) The method of claim 67, wherein the single logic sequence is defined in computer executable code configured to be executed by a processor.

72. (Original) The method of claim 67, wherein automatically repeating the transporting step includes loading a first product having a first size onto a load and loading a second product having a second size onto the same load.

73. (Original) The method of claim 67, wherein repeating the single logic sequence for at least two consecutive transporting cycles includes:

transporting a first product having a first size in a first transporting cycle; and

transporting a second product having a second size in second, successive transporting cycle.

74. (Original) The method of claim 67, further including building a second load with second product having a second size, different than the size of the first product,

wherein when building the second load, a controller repeats the same single logic sequence.

75.-82. (Cancelled).

83. (Original) The method of claim 67, wherein transporting the product includes executing the single logic sequence in a controller, and repeating the single logic sequence for at least two consecutive transporting cycles.

84. (Cancelled).

85. (Cancelled).

86. (Original) The method of claim 67, wherein determining when the load is completely built includes monitoring at least two of a length, a width, and a height sensor for a signal indicating that at least two of a desired length, a desired width, and a desired height of the load are reached; and

receiving the signal from the at least two monitored sensors at a controller.

87.-172. (Cancelled).

173. (Previously Presented) A method of building a load with product from an infeed area, the method comprising:

defining a desired area of a load to be filled with product using at least two of a height sensor, a length sensor, and a width sensor;

automatically filling the desired area with product by executing a first logic sequence in a controller, and repeating the first logic sequence for at least two transporting cycles, and executing a second logic sequence in the controller for a different transporting cycle while building the load; and

determining when the desired area is filled using at least two of the height sensor, the length sensor, and the width sensor.

174. (Previously Presented) A method of building a load with product from an infeed area of a palletizer, the method comprising:

defining a desired area of a load to be filled with product using a height sensor and at least one of a length sensor and a width sensor, wherein using the height sensor includes positioning the height sensor to set a desired height of the load;

automatically filling the desired area with product; and

determining when the desired area is filled.

175. (Previously Presented) The method of claim 174, wherein defining the desired area further includes positioning at least one of the length sensor and the width sensor to define a respective length or width of the desired area.

176. (Previously Presented) A method of building a load with product from an infeed area, the method comprising:

automatically moving a product from the infeed area to a load building area;

automatically depositing the product on the load;

automatically repeating the moving and depositing steps by repeating a single logic sequence for at least two consecutive moving and depositing steps;

wherein the first moving and first depositing steps load a first product having a first size onto the load, and wherein the second moving and second depositing steps load a second product having a second size different from the first size onto the load; and

automatically determining when the load is completely built.

177. (Previously Presented) The method of claim 176, further including building a second load with the second product having the second size, different than the size of the first product, wherein when building the second load, a controller repeats the same single logic sequence.

178. (Previously Presented) A method of building a load with product from an infeed area of a palletizer, the method comprising:

defining a desired space to be filled with product by physically establishing at least two of a height threshold, a length threshold, and a width threshold;

automatically filling the desired space with product; and

automatically signaling that the desired space is filled when product reaches at least two of the height threshold, the length threshold, and the width threshold.

179. (Previously Presented) The method of claim 178, wherein defining a desired space to be filled with product further includes defining a desired area of a load to be filled with product.

180. (Previously Presented) The method of claim 178, wherein physically establishing at least two of a height threshold, a length threshold, and a width threshold includes positioning at least two of a height detector, a length detector, and a width detector.

181. (Previously Presented - Withdrawn) The method of claim 178, wherein defining a desired space of a load to be filled with product further includes defining a desired volume of a load to be filled with product.

182. (Previously Presented) A method of building a load with product from an infeed area of a palletizer, the method comprising:

defining boundaries of a desired area of a load to be filled with product by physically establishing at least two of a load height, a load length, and a load width;

automatically filling the desired area with a quantity of product; and

automatically signaling when the desired area is filled when product reaches at least two of the load height, the load length, and the load width.

183. (Previously Presented) The method of claim 182, wherein automatically filling includes filling with products of various sizes, and wherein variation in product size

does not alter the at least two physically established load height, load length, and load width.

184. (Previously Presented) The method of claim 182, wherein automatically filling the desired area with a quantity of product includes filling the desired area with one or more rows of product to form a layer of product.

185. (Previously Presented) The method of claim 184, wherein the load width is unaffected by the quantity of rows used to form the layer.

186. (Previously Presented) The method of 182, wherein automatically filling the desired area with a quantity of product includes filling the desired area with one or more layers of product to form the load.

187. (Previously Presented) The method of claim 186, wherein the load height is unaffected by the quantity of layers used to form the load.

188. (Previously Presented - Withdrawn) The method of claim 182, wherein defining boundaries of a desired area of a load to be filled with product further includes physically defining the load height, the load length, and the load width to define boundaries of a desired load volume.

189. (Previously Presented) A method of building a load with product from an infeed area of a palletizer, the method comprising:

defining a desired area of a load to be filled with product by establishing physical markers delimiting at least two of a load height, a load length, and a load width;

automatically filling the desired area with product; and

automatically signaling when the desired area is filled when product reaches at least two of the load height, the load length, and the load width.

190. (Previously Presented) The method of claim 189, wherein automatically filling the desired area with product includes varying the size of product used to fill the desired area without altering the desired area.

191. (Previously Presented) The method of claim 189, wherein automatically filling the desired area with product further includes filling the desired area with a plurality of rows of product to form a layer of product, and wherein each row has a row width.

192. (Previously Presented) The method of claim 191, wherein the load width is unaffected by variations in row width between each row.

193. (Previously Presented) The method of 189, wherein automatically filling the desired area with product further includes filling the desired area with a plurality of layers of product to form the load, and wherein each layer has a layer height.

194. (Previously Presented) The method of claim 193, wherein the load height is unaffected by variations in layer height between each layer.

195. (Previously Presented - Withdrawn) The method of claim 189, wherein defining a desired area of a load to be filled with product further includes establishing physical boundaries delimiting the load height, the load length, and the load width to define a desired load volume.

196. (Previously Presented) A method of building a load with product from an infeed area of a palletizer, the method comprising:

defining a boundary to be filled in with product by physically setting at least two of a height dimension, a length dimension, and a width dimension of the load;

automatically filling in the boundary with product, wherein the height dimension, the length dimension, and the width dimension of the load remain substantially constant as product characteristics vary; and

automatically signaling that the boundary is filled in when product reaches at least two of the height dimension, the length dimension, and the width dimension of the load.

197. (Previously Presented) The method of claim 196, wherein automatically filling in the boundary with product includes filling in the boundary with a plurality of rows of product having varying row widths.

198. (Previously Presented) The method of claim 196, wherein automatically filling in the boundary with product includes filling in the boundary with a plurality of layers of product having varying layer heights.

199. (Previously Presented) The method of claim 196, wherein defining a boundary to be filled in with product includes defining an area to be filled in with product by physically setting two of the height dimension, the length dimension, and the width dimension.

200. (Previously Presented - Withdrawn) The method of claim 196, wherein defining a boundary to be filled in with product includes defining a volume to be filled in with product by physically setting the height dimension, the length dimension, and the width dimension.

201. (Previously Presented) A method of building loads with product from an infeed area of a palletizer, the method comprising:

defining a boundary of a desired area of a first load to be filled with product of a first size by physically delineating at least two of a desired height of the first load, a desired length of the first load, and a desired width of the first load;

automatically filling the desired area with as much product of the first size as needed to meet the boundary;

moving the first load away; and

automatically filling the desired area with as much product of a second size different from the first size as needed to meet the boundary without adjusting the boundary.

202. (Previously Presented - Withdrawn) The method of claim 201, wherein defining a boundary of a desired area of a first load further includes physically delineating the desired height of the first load, the desired length of the first load, and the desired width of the first load, to define a boundary of a desired volume.

X. Evidence Appendix

There is no evidence being relied upon by Appellant.

XI. Related Proceedings Appendix

There are no related proceeding decisions.